UTAH DIVISION OF WATER QUALITY
195 North 1950 West
PO Box 144870
Salt Lake City, Utah 84114-4870

Willard Bay Project Proposal Form

NOTE: Proposal must be no longer than 6 pages. Supplemental documents such as letters of support, information to demonstrate previous project implementation and other relative supportive documents may be submitted in addition to this form.

Applicant Name: Rich Hansen

Co-Applicant Name(s) (if applicable):

Project Title: **Farmington Bay Waterfowl Management Area - J Dike Reconstruction**

Agency or Business Name (if applicable): Utah Division of Wildlife Resources

Mailing Address: 2004N. 1400W. City: Clinton State: Utah Zip: 84015

Phone: (801) 391-1454 E-mail: richhansen@utah.gov

☐ Individual ☐ Non-Profit ☒ Govt. Agency ☐ Academic ☐ Commercial ☐ Other

1. Estimated Project Costs:

Labor	$80,000
Materials	$5,000
Equipment	$45,000
Administration	$15,000
Miscellaneous	$5,000
TOTAL	**$150,000**

Other sources of project funding:

UDWR/Fowl minded	$9,000		$
Source	Amount	Source	Amount

Total project cost including other sources of funding: $150,000. (please include bids for labor, equipment, rentals, etc…). A sportsman's group named Fowl minded has donated $9,000 towards this project, so we are asking for $141,000.

2. Describe the purpose and need of the project:

The purpose of this project is to reconstruct an existing 5,840 linear feet of dike and to construct an additional 3,900 linear feet of dike to the J-dike at Farmington Bay Waterfowl Management Area (FBWMA). There is an existing foot print of the original "J-Dike" at FBWMA, just west of Goose Egg Island. This dike was damaged during a flood in the 1980's

and was never repaired. If the dike were repaired, the area would again be able to impound waters and would provide productive water bird habitat.

With the annual expansion of *Phragmites*, a non-native aggressive reed, on the eastern shores of the Great Salt Lake, there is less habitat for waterfowl and shorebirds every year. *Phragmites* has taken over the existing footprint of the J-Dike and has out-competed other beneficial wetland vegetation. In other areas of FBWMA where there are impoundments and water control capabilities, *Phragmites* has been controlled. With the re-construction of this dike, the ability to control water levels will be regained and *Phragmites* will be controlled. Once the *Phragmites* is controlled, the habitat will once again benefit waterfowl and shorebirds and provide recreational opportunities to hunters and other recreationalists.

FBWMA is comprised of approximately 18,000 acres (with an indefinite west boundary into the Great Salt Lake) and is located at the base of the Jordan River delta along the southeast bay of the Great Salt Lake in Davis and Salt Lake Counties. For management purposes, it is divided into four units; Unit 1, Unit 2, Turpin Unit, and the Crystal Unit. Private lands surround the majority of the WMA to the north, with the Great Salt Lake bordering on the west. The development of FBWMA began on July 1, 1935, with a plan to convert the alkaline lake bed into productive waterfowl habitat. The first impoundments, Units 1 and 2, were completed in 1940 by the Civilian Conservation Corps.

3. Estimated time frame of the project with significant milestones (Note: Project must be completed with final reports filed by January 1, 2018):

UDWR would acquire the necessary permits from the U.S. Army Corps of Engineers by July 1, 2015. The project would be designed and engineered by January 1, 2015, with construction starting in July of 2015. The project should be completed by September 15, 2015.

4. Describe the location of the project with attached location map, including details on the total area that will be directly enhanced by the project:

The project will be located at FBWMA, specifically northwest of Unit 1 (see map). There is an existing footprint of the J-dike that would be the base of the new dike. The legal description of the location is Township 2N Range 1W section 24.

The total acres that will be directly enhanced will be 400 acres, including the 300 acres inside of the dike and 100 acres that will be flooded outside of the dike within the Great Salt Lake.

5. Describe how the project will specifically enhance and protect waterways affected by the Willard Bay diesel releases and improve the conditions of one or more of the following: wildlife, habitat, natural vegetation, water quality or emergency response:

Beneficial uses of the Jordan River, which include warm water fish, water birds, and aquatic organisms in their food chains, are protected by a variety of water quality standards, but every segment of the Jordan River has been found to be impaired for one or more beneficial uses due to exceeding one or more water quality standards. Segments of the lower Jordan River are currently impaired due to low levels of dissolved oxygen, organic enrichment, total dissolved solids, high water temperatures, and *E. coli*. The Jordan River receives pollutants from many sources, including Utah Lake, wastewater treatment facilities, tributaries, storm water, and diffuse runoff. While the quality of Jordan River water is not ideal for supporting the uses by fish and wildlife, it nevertheless serves as the life-blood of a series of ponds and wetlands at the lower end of the Jordan River and Farmington Bay. Management of the Jordan River is crucial to protecting the existing beneficial uses and potentially improving the condition of this waterway and wetland habitat that is supported by it.

This project would be beneficial for waterfowl and other migratory bird species. Currently, waterfowl are not using this area because it is dominated by dense, monotypic stands of emergent vegetation, especially *Phragmites*. This project will turn 300 acres of low quality habitat into a productive wetland that will attract waterfowl and other migratory birds. Large monotypic stands of undesirable vegetation will be sprayed, burned and then flooded with water. The dike will provide the ability to impound water, while the water control structures will allow the water in the impoundment to be manipulated. Native submerged aquatic vegetation (sago-pondweed) would naturally grow in the impoundment and would attract and feed waterfowl. Furthermore, the new impoundment will serve as an area where sediments can settle out of the system before discharging into the Great Salt Lake.

6. Describe project's connectivity to other natural areas or projects that further enhance wildlife, habitat, natural vegetation, water quality or emergency response:

FBWMA is located immediately adjacent to the GSL and its freshwater ponds and marshes support thousands of water birds annually. The GSL is of hemispheric importance to migratory water birds (waterfowl, shorebirds and wading birds), and many species use the GSL as nesting, feeding and staging areas. At times, millions of birds may be found on the GSL and the surrounding wetland/upland habitat complexes. Since the GSL is a dynamic system with the lake elevation changing seasonally and annually, the abundance and location of salt, brackish and freshwater habitats continually change over time. These changes create a continual diversity and continuity of available habitats, such that wildlife, especially waterfowl and shorebirds, will move around the GSL to find those habitats that supply their needs. It is because of these habitats that the GSL has become so critically important to wildlife, with the Lake sometimes supporting over 50% of the worldwide populations of some avian species.

The new impoundment will enhance other man-made impoundments, migratory bird habitat, and water quality at FBWMA. For instance, the project will enhance the quality of water that is discharged into the Great Salt Lake (GSL). Specifically, water draining from one of the large impoundments at FBWMA (Unit 1) will discharge water to the new impoundment to the west. Therefore, water will filter through the new smaller impoundment before discharging into the GSL. During the waterfowl hunt, Unit 1 can hold as many as 80,000 ducks in the waterfowl rest area. No trespassing or disturbances are permitted in the rest area, so the ducks are heavily

concentrated in the Unit. However, the high numbers of ducks quickly eat the area out of sago-pond weed. This project would provide waterfowl additional habitat directly west of the rest area.

7. Describe any additional social benefits of implementing this project:

This project will enhance waterfowl hunting, bird-watching, photography and school group education tours at FBWMA. Since the 300 acres being considered in this project are currently dominated by thick monotypic stands of *Phragmites* and bird use is minimal, waterfowl hunters are missing hunting opportunities they could be having on public land. Also, this project will enhance watchable wildlife opportunities by attracting more waterfowl and shorebird species for the public to view.

The J-dike is in close proximity to the Great Salt Lake Nature Center at FBWMA. The visitors at the nature center facility and area trails will have the opportunity to see and experience more wildlife than they currently do with the J-dike not functioning correctly.

8. Project plans and details, including rights to work on specified piece of land:

The FBWMA is owned and managed by the Utah Division of Wildlife Resources (UDWR). A private engineer will be hired to do a wetland delineation, design and draw up the plans for dike construction including the location of the water control structures, obtain any necessary permits from the U.S. Army Corps of Engineers, stake and survey the area, and oversee construction of the project. In addition, UDWR will construct 3 water control structures for the project.

The construction contractor will be required to supply all labor, material, and equipment required to complete the construction of dikes. Borrow areas for dike construction will be located in a wetland area adjacent to the dike construction. The crown of the dike shall be drivable by maintenance vehicles. The crest, side slope, and berms of the new dike shall be trimmed to conform to the design plans. Shaping of the dike shall yield a smooth surface and obtain finish lines and grades to match the existing foot print.. To build the dike, it will take roughly 25,000 cubic yards of material. The three water control structures will be installed on the west side of the impoundment. The water control structures will be cement with wing-walls, will be five feet high, will accommodate a 45" wide stop-log, and be affixed with a 24" diameter poly-urethane pipe. The water control structures will be constructed at FBWMA, by UDWR personnel.

9. Describe your experience in implementing projects of similar scope and magnitude:

I have worked for the Utah Division of Wildlife Resources for over eleven years. I was the assistant at Ogden Bay WMA for one year, the assistant at FBWMA for two years and I have been the manager of FBWMA for the last eight and a half years. During that time we have constructed two new units, (The Doug Miller Unit) and the Red Butte mitigation monies Unit one enhancement project (The Fullenkamp Unit); cleaned approximately 21 miles of channels of which 13 miles were part of the Red Butte mitigation monies Channel cleaning project, breached and repaired a dike due to flooding, replaced fifteen failed water control structures and repaired miles of damaged dikes. In addition to this maintenance, we have sprayed thousands of acres of noxious weeds and improved the habitat quality for waterfowl, shorebirds, and wading birds. We

have also managed 60 acres of wetlands and uplands for the Utah Transit Authority that was mitigation for Frontrunner transit project. We have met all of the U.S. Army Corps of Engineers mitigation requirements for this project. We have also created a 4 acre pond with islands as mitigation for the FBWMA Nature center road and parking lot.

10. Describe how ongoing maintenance of the project will be funded and carried out:

Ongoing maintenance should be minimal and should be able to be absorbed into our standard operating budget. However, special projects or maintenance on the project in the future will be submitted as a habitat project proposal to the Utah Division of Wildlife Resource's Habitat Council for funding consideration.

11. List consultants or agency partners that have participated in project development:

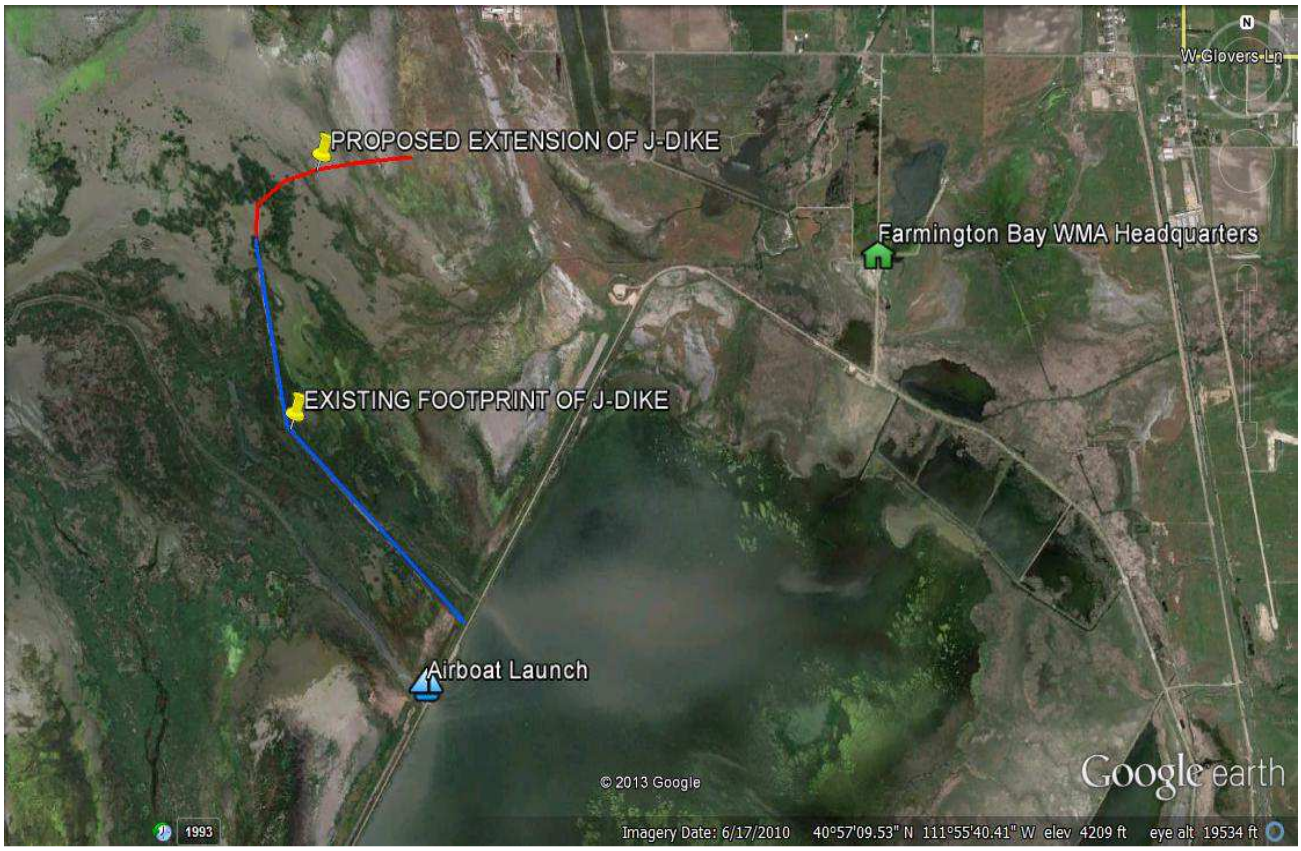
Equinox Engineering was the engineer used on the Red Butte mitigation project "Unit one enhancement". The engineering firm was instrumental in all aspects of that project and are confident that they could produce an equally superior product on this project. Please see the attached letters of support.

The following organizations also support this project. Please see the attached letters of support:

- Utah Airboat Association
- Delta Waterfowl
- Utah Mud Motor Association
- Utah Waterfowl Association

Signature Richard O. Hansen Date 5/5/14

Applicant


PROPOSED EXTENSION OF J-DIKE
Farmington Bay WMA Headquarters
EXISTING FOOTPRINT OF J-DIKE
Airboat Launch
W Glovers Ln
© 2013 Google
Google earth
1993
Imagery Date: 6/17/2010 40°57'09.53" N 111°55'40.41" W elev 4209 ft eye alt 19534 ft

Willard Peak Chapter of Delta Waterfowl Foundation

To Whom It May Concern,

This letter is to serve as my support and recommendation for a project Rich Hansen,the manager of Farmington Bay WMA of the Utah Department of Wildlife Resources has submitted.

We at Delta Waterfowl feel confident that the money you are considering awarding Rich will be well spent in rebuilding and restoring the J Dike within the Farmington Bay WMA. This marsh is an important asset to hunters relying on public land, so this restoration would be a blessing to hunters and the waterfowl that utilize it here in Utah. I have seen Rich's work in the development and improvement of the marshes, impoundments and the continuing fight with invasive species such as phragmites. I have also had the privilege of working with Rich and other volunteers on multiple projects over the last 4 years, in conjunction with many other organizations. I have worked with him on nesting & habitat projects as well as youth projects.

We hope you will strongly consider this request and look forward to helping on the project in any way we can.

Sincerely,

Jeff Adams
Chairman, Willard Peak Chapter
Delta Waterfowl
Brigham City, UT.

UTAH WATERFOWL ASSOCIATION

UTAH WATERFOWL ASSOCIATION

May 2, 2014

To whom it may concern:

The Utah Waterfowl Association ("UWA") is a non-profit organization that represents the interests of the roughly 15,000 waterfowl hunters in the state of Utah, a majority of which represent the Farmington Bay Waterfowl Management Area ("FBWMA"). I write this letter in support of the Division of Wildlife Resources' ("DWR") grant proposal to fund the specific projects listed below.

1. Installation of artificial islands in the rest area of Unit 1.

2. Repairing an existing dike referred to as the "J Dike."

We believe that each of these projects has a unique benefit to both waterfowl and waterfowl hunters and should be funded. The DWR has a long track record of successfully using both private and public funding to accomplish these types of projects. For example, the Doug Miller Unit at the FBWMA was a large project that was successfully completed utilizing funding from a number of sources including private funds which had significant benefits to Utah waterfowl and waterfowl hunters.

Thank you for consideration and should you have any questions please do not hesitate to call me at (801) 589-9267.

Sincerely,

R. Jeff Richards
President

Utah Mud Motor Association
Utah Bowfishing Association
1341 North 325 East
Layton, UT 84041
(801)721-0297
www.utahmudmotor.com
www.utahbowfishing.com

April 28, 2014

To whom it may concern:

As the active President of the Utah Mud Motor Association and the Utah Bowfishing Association, I'm writing on behalf of Rich Hansen and the staff of Farmington Bay Waterfowl Management Area. Over the course of the past eleven years, I've personally witnessed the positive transformation of Farmington Bay WMA while Rich and his staff have been in power. Some of these great projects include: dyke reconstruction, phragmites removal, construction of new units(in cooperation with other waterfowl conservation groups), and many other positive projects that make Farmington Bay what it is today. These projects benefit both an unsurpassable amount of wildlife and provides sportsmen, and outdoor enthusiasts a place to escape, while working hard to preserve and protect the very land that provides such resources. Rich's motivation, follow through, and management practices have undoubtedly made Farmington Bay WMA a resource worth fighting for.

Sincerely,

Josh Noble

Utah Bowfishing Association President
Utah Mud Motor Association President

April 25, 2014

To whom it may concern,

As president of the Utah Airboat Association, I have had numerous opportunities to work with Rich Hansen and his staff at Farmington Bay Waterfowl Management Area and although his crew is not large, I am amazed at projects they are able to take on and efficiently complete. Rich is organized. He knows how to set goals and get things done.

We support Farmington Bay WMA in their efforts to battle the insidious phragmites. This will be an ongoing endeavor which Rich and his staff have faced head-on. He has pioneered the effort to put range cattle in some areas during the summer to graze on the phragmites. It has proven to be quite effective.

Their efforts to develop and improve the water control structures, including the establishment of the Doug Miller Unit, have certainly enhanced the usable habitat for waterfowl and the other residents of the WMA.

We support Rich in his future plans to build islands in the rest area portion of Unit 1, as well as his plans to reconstruct the J- dike which was destroyed during the floods of the 1980's. The J-dike area is completely choked with phragmites at the present time and is of no value to waterfowl or hunters. Repairing this dike would mean reopening a large area of productive habitat.

We appreciate Farmington Bay WMA and recognize it as one of the treasures of our Great Salt Lake. We pledge our continued support to the work that is done to improve and maintain this valuable resource.

Kerry McCloud
President
Utah Airboat Association

Utah Airboat Inc. | 56 S. Meadow Road | Mantua, Utah 84324 | 435-723-7020